CONFIDENTIAL Emissions Calculations - Project Columbia 2021 Actual Emissions

		Production		VOC (as VOC)		СО		NO_X		SO ₂		TSP		PM ₁₀		PM _{2.5}		TRS		H ₂ S		LEAD		CO ₂ e	
				factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions	factor	emissions
Emission Unit	Basis	amount	UOM	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy	lb/UOM	tpy
BASELINE ACTUAL EMISSIONS (BAE)	through JUNE	2012 ⁵																							
TOTAL BASELINE EMISSIONS ^A					1,027.2		264.2		263.2		2,039.9		105.7		28.3		13.2		147.2		9.7		0.00		55,428
2021 ACTUAL EMISSIONS																									
Kraft Mill NCG System - Brown Mill ^{B,C,D}	Modified				50.97		18.18		103 81		1,354 62								4.39		0 28				
Kraft Mill Bleach Plant	Retired				0.00		0 00												0.00						
CIO2 Plant ⁱ	Retired				0.00																				
Methanol Tank ^l	Retired				0.00																				
No. 1 Paper Machine - Coated Paper	Retired				0.00								0.00		0.41		0.41								
No. 2 Paper Machine - Brown Paper ^E	Modified				0.00								0.00		0.00		0.00		0.00		0 00				
No. 3 Paper Machine - Linerboard ^E	Modified				154 82								0.39		0.39		0.39		5.59		1.18				
Pulp Dryer - Unbleached ^E	Modified				22.12								0.06		0.06		0.06		0.58		0 04				
No. 1 Coater - Natural Gas ^l	Retired				0.00		0 00		0.00		0 00		0.00		0.00		0.00						0.00		0
No. 2 Coater - Natural Gas ^l	Retired				0.00		0 00		0.00		0 00		0.00		0.00		0.00						0.00		0
No. 3 On-Machine Coater - Natural Gas ^l	Retired				0.00		0 00		0.00		0 00		0.00		0.00		0.00						0.00		0
Starch Silos ^l	Retired												0.00		0.00		0.00								
TMP ^I	Retired				0.00																				
TMP Bleaching ^l	Retired				0.00																				
Woodyard ^E	affected				4.21								105.00		15.75		1.05								
Power Boiler - Natural Gas ^l	Retired				0.00		0 00		0.00		0 00		0.00		0.00		0.00						0.00		0
Power Boiler - No. 6 Oil	Retired				0.00		0 00		0.00		0 00		0.00		0.00		0.00						0.00		0
Wastewater System - Brown Mill ^{F,G,H}	Modified				379 89													5.01E-02	12.51	2 09E-02	5 22				
TOTAL 2021 ACTUAL EMISSIONS					612.0		18.2		103.8		1,354.6		105.4		16.6		1.9		23.1		6.7		0.00		0
NSR APPLICABILITY - BAE-to-ACT																									
TOTAL BASELINE EMISSIONS					1,027.2		264.2		263.2		2,039.9		105.7		28.3		13.2		147.2		9.7		0.00		55,428
TOTAL 2021 ACTUAL EMISSIONS					612.0		18.2		103.8		1,354.6		105.4		16.6		19		23.1		6.7		0.00		0
NET EMISSION INCREASE					(415.2)		(246.0)		(159.4)		(685.3)		(0.2)		(11.7)		(11.3)		(124.1)		(2.9)		(0.0)		(55,428)
NSR Threshold					40		100		40		40		25		15		10		10		10		0.6		75,000

A - Baseline emissions from April 2020 Project Columbia permit application.

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B - VOC, NOX and CO emissions factor represents DHEC multiple source test calculator algorithm value of 5.42 lb/ADTP for calendar year 2021 (June 2021 source test = 5.81 lb/ADTP, October 2021 source test = 3.99 lb/ADTP).

D - TRS and H2S emissions factors represent highest test condition from June 2021 source testing of combination boilers burning NCG + SOG.

E - VOC emissions factor from April 2020 Project Columbia permit application, TRS emissions factor from June 2021 source test.

F - VOC emissions factor from DHEC multiple source test calculator algorithm is 1.52 lb/ADTP for calendar year 2021 (July 2021 Subpart S initial performance test = 1.50 lb/ADTP, October 2021 Subpart S quarterly perfomance test = 1.62 lb/ADTP, based on the average ASB methanol loading and ASB fraction volatilized from WATER9 during the tests).

G - TRS emissions factors based on WATER9 modeling of WTS from June 2021 wastewater sampling data.

H - H2S emissions factors based on H2SS M modeling of WTS using June 2021 wastewater sampling data.

I - Source retired in 2020, no emissions in 2021.

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